

TECHNICAL DATA SHEET

TECHNYL RED J 218HP V50 BK 21N



TECHNYL RED J 218HP V50 BK 21N is a co-polyamide 66/6T reinforced with 50% glass fibre, heat stabilized, for injection moulding. This grade offers outstanding long-term heat ageing performance of up to 220°C for 2000 hours or 210°C for 3000 hours in addition to strength and stiffness at use temperature higher than 35% glass fiber grades. TECHNYL RED J shows high chemical resistance, easy processing and excellent surface aspect. In addition, TECHNYL RED J delivers high burst pressure levels. Recommended melt and mold temperatures are significantly lower than competitive PA4.6 or PPA resins, which saves energy during processing and minimizes part cooling time. The data provided are based on laboratory / experimental results and could be adjusted after industrial production.

General

Certifications	RoHS	EC 1907/2006 (REACH)
Polymer type	PA66/6T copolymer	
Feature	heat-aging stabilized excellent processability heat resistant	chemical resistant good surface finish high stiffness
Applications	automotive applications	
Colors available	black	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66/6T-GF50
ISO 16396 designation	PA66/6T,GF50,MH,S14-160

Condition	Standard	Unit	Value
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Physical properties

Density		ISO 1183	g/cm ³	1.58
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.3 - 1.4
Water absorption	24 hr, 23°C	ISO 62	%	0.4 - 0.5
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.2 - 0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	0.4 - 0.6

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	17000 / 14500
Stress at break		ISO 527-1/-2	MPa	240 / 185
Strain at break		ISO 527-1/-2	%	2.4 / 2.8
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	15500 / 13500
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	370 / 305
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	95 / 100
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*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	273
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	245

	Condition	Standard	Unit	Value
Burning behaviour				
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100mm/min

Processing conditions	
Drying temperature/time	80 °C
Suggested max moisture	0.12 %
Rear temperature	290 - 300 °C
Middle temperature	295 - 305 °C
Front temperature	300 - 310 °C
Recommended mould temperature	85 - 100 °C

Injection notes

The material is supplied in airtight bags, ready for use.,In case that the virgin material has absorbed moisture, it must be dried
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Injection notes

with a dehumidified air drying equipment, dew point minimum -20°C., Recommended time 2-4h.

Injection advice

For reinforced polyamides, Domo recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (DIN Norm). In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered.,The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.